

(19) World Intellectual Property
Organization
International Bureau



557622

(43) International Publication Date
2 December 2004 (02.12.2004)

PCT

(10) International Publication Number
WO 2004/105104 A1

(51) International Patent Classification⁷: **H01L 21/027**,
29/06, G03F 7/00, H01L 21/20, 51/40, 21/311, 21/312,
H05B 33/10, H01L 21/28

(21) International Application Number:
PCT/IB2004/050669

(22) International Filing Date: 13 May 2004 (13.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03101431.9 20 May 2003 (20.05.2003) EP

(71) Applicant (for all designated States except US): **KONIN-
KLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DUINEVELD**,
Paulus, C. [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA
Eindhoven (NL). **GELINCK, Gerwin, H.** [NL/NL]; c/o
Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(74) Agent: **ROLFES, Johannes, G., A.**; Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

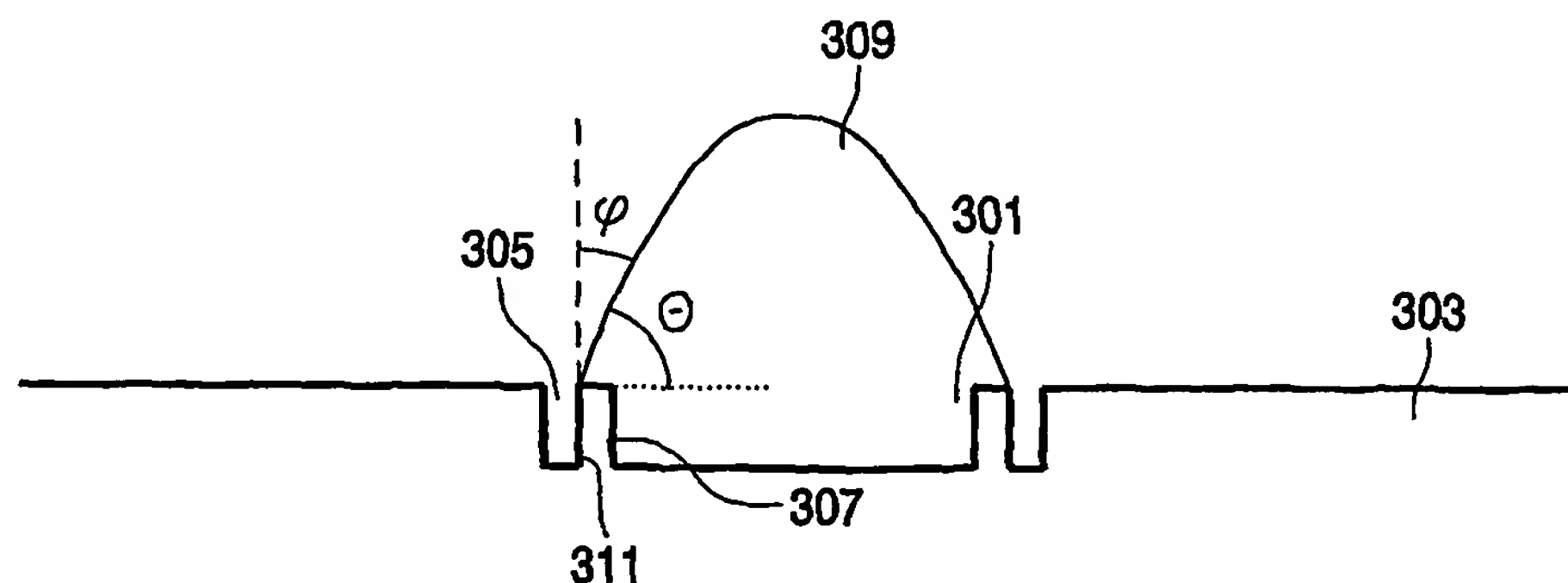
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,
EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,
ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,
SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG)

[Continued on next page]

(54) Title: A STRUCTURE FOR A SEMICONDUCTOR ARRANGEMENT AND A METHOD OF MANUFACTURING A SEMICONDUCTOR ARRANGEMENT



(57) Abstract: The invention relates to a structure for a semiconductor arrangement. A resist structure for supporting deposition of a solution containing a semiconductor is directly or through intervening layers coupled to a substrate. The resist structure comprises a depression (301) for depositing of the solution containing the semiconductor (309) and a trough (305) aligning at least part of an edge of the depression (309) and separated from the depression (309) by a protrusion (307). The trough (305) preferably surrounds the depression (309). The trough provides a pinning effect on the solution containing the semiconductor thereby improving the wettability and accordingly allowing for increased volume of semiconductor to be applied to a given area.



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.